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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,351	01/30/2004	Norihiro Hara	16869P-096600US	8355
20350 7590 01/16/2008 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			EXAMINER AHLUWALIA, NAVNEET K	
			ART UNIT 2166	PAPER NUMBER
			MAIL DATE 01/16/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/769,351

Applicant(s)

HARA ET AL.

Examiner

Navneet K. Ahluwalia

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2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 12-18 and 34-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-18 and 34-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to the Amendment filed 11/16/2007.

Response to Arguments

2. Claims 1 – 7, 12 – 18 and 34 – 39 are pending in this Office Action. After a further search and a thorough examination of the present application, claims 1 – 7, 12 – 18 and 34 – 39 remain rejected.
3. Applicant's arguments filed with respect to claims 1 – 7, 12 – 18 and 34 – 39 have been fully considered but they are not persuasive.

First, Applicant argues that there is no teaching in Cotner or Vosseler alone or in combination of obtaining preset substitution information indicating that a storage area managed by a DBMS running on said failed computer is to be managed and accessed by a DBMS already running on another one of said plurality of computers as a substitute DBMS.

In response to Applicant's argument, the Examiner submits that Cotner teaches the preset or preconfigured information indicating that a storage area managed by a DBMS running on said failed computer is to be managed and accessed by a DBMS already running now as a substitute DBMS in figure 2 and column 2 lines 60 - 67 followed by column 3 lines 1 - 9. Furthermore this process is described in detail in column 3 lines 49 – 65 as to how the already running DBMS becomes the substitute DBMS due to the failure after reconfiguration.

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***Second,** Applicant argues that there is no teaching in Cotner or Vosseler alone or in combination of changing an association from a failed DBMS to said substitute DBMS.*

In response to Applicant's argument, the Examiner submits that Cotner teaches the changing of association from a failed DBMS to said substitute DBMS based on the preconfigured information in figures 2, 3 and 4 and column 2 lines 60 – 67 followed by column 3 lines 1 – 9 and 49 – 65. Furthermore this change of association is also explained in column 4 lines 60 – 67 followed column 5 lines 1 – 6 and further in detail in column 7 lines 30 – 54.

Other independent claims recite the same subject matter and for the same reasons as cited above the rejection is maintained.

Hence, Applicant's arguments do not distinguish the claimed invention over the prior art of record. In light of the foregoing arguments, the 102 rejections are sustained.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 7, 12 – 18 and 34 – 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotner et al. ('Cotner' herein after) (US 6,247,055 B1) further in view of Frank Vosseler ('Vosseler' herein after) (US 2003/0126240 A1).

With respect to claim 1,

Cotner discloses a method for processing databases in a system which includes a plurality of storage areas each storing a database and a plurality of computers each having a database management system (DBMS) running thereon which manages one of said plurality of storage areas, each said storage area being associated with only said DBMS managing said storage area and being accessed by only said DBMS, said method comprising:

- when a failure has occurred in one of said plurality of computers as a failed computer, obtaining preset substitution information indicating that a storage area managed and accessed by a DBMS running on said failed computer is to be managed by a DBMS already running on another one of said plurality of computers as a substitute DBMS (Figure 2, column 2 lines 60 – 67 and column 3 lines 1 – 9, Cotner); and
- based on said substitution information, changing association of said storage area with said DBMS on said failed computer to said substitute DBMS, said storage area to be managed by said substitute DBMS already running on said another computer (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner).

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Cotner however does not disclose the the backup dbms or server already running explicitly as claimed.

However, Vosseler teaches the failover condition in paragraphs 13, 14 and 32.

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both are in the same field of invention of network flow and maintenance along with monitoring. Furthermore, the detection of possible failure and failover condition would improve the efficiency of a network (paragraphs 13, 14, Vosseler). Furthermore, there would be interruption free working of the network transmission/communication (paragraph 47, Vosseler).

With respect to claim 2,

Cotner discloses the method as recited in claim 1, wherein said substitution information includes association information associating an identifier of said DBMS running on said failed computer with an identifier of said substitute DBMS already running on said another computer, said substitution information indicating that said storage area managed by said DBMS running on said failed computer is to be managed by said substitute DBMS already running on said another computer when a failure occurs (the resyn port number is pre assigned and this is similar to the unique identifier of the substitute computer, column 5 lines 7 – 37, Cotner).

With respect to claim 3,

Cotner discloses the method as recited in claim 2, wherein said substitution information comprises a mutual substitution configuration in which two of the DBMSs are associated with one another whereby one of the two DBMSs is a substitute DBMS for the other of the two DBMSs as a failed DBMS mutually (column 5 lines 22 – 34, Cotner).

With respect to claim 4,

Cotner disclose the method as recited in claim 2, wherein said substitution information comprises a substitution configuration in which a group of the computers from a first DBMS to a last DBMS are associated with each other in a manner whereby a first DBMS is a substitute DBMS for a second DBMS which is a substitute DBMS for a third DBMS, and the last DBMS is a substitute DBMS for the first DBMS (column 5 lines 17 – 33, Cotner).

With respect to claim 5,

Cotner discloses the method as recited in claim 2, wherein said substitution information comprises an n-to-1 substitution configuration whereby one of the DBMSs is a substitute DBMS for n of the DBMSs as failed DBMSs (as shown in Figure 5 and column 5 lines 30 – 37 explain that the resync port number is matched to a list and it

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would be inherently possible that more than one system could have the same resync number, Cotner).

With respect to claim 6,

Cotner discloses the method as recited in claim 1, wherein said substitution information includes a plurality of pieces of association information each associating an identifier of said DBMS running on said failed computer, an identifier of the substitute DBMS running on one of a plurality of substitute computers, and priority information indicating a priority with one another, said substitution information indicating that said storage area managed by said DBMS running on said failed computer is to be managed by said substitute DBMS running on one of said other computers selected according to said priority information (column 5 lines 7 – 37, Cotner).

With respect to claim 7,

Cotner discloses the method as recited in claim 1, further comprising taking over processing from said DBMS on said failed computer by said substitute DBMS on said another computer based on said substitution information (column 3 lines 3 – 9, Cotner).

With respect to claim 12,

Cotner discloses a system for processing databases, said system comprising:

- a plurality of storage areas each storing a database (Figure 1, Cotner); and

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- a plurality of computers each having a DBMS running thereon which manages one of said plurality of storage areas, each said storage area being associated with only said DBMS managing said storage area and being accessed by only said DBMS (Figure 2 and column 1 lines 41 – 62, Cotner);
- wherein each DBMS includes a substitution control section configured, when a failure has occurred in one of said plurality of computers as a failed computer, to obtain preset substitution information indicating that a storage area managed by a DBMS running on said failed computer is to be managed by a DBMS already running on another one of said plurality of computers as a substitute computer (Figure 2, column 2 lines 60 – 67 and column 3 lines 1 – 9, Cotner); and, based on said substitution information, to change association of said storage area with said failed computer to said substitute computer, said storage area to be managed and accessed by said substitute DBMS running on said another computer (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner).

Cotner however does not disclose the backup dbms or server already running explicitly as claimed.

However, Vosseler teaches the failover condition in paragraphs 13, 14 and 32.

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because

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both are in the same field of invention of network flow and maintenance along with monitoring. Furthermore, the detection of possible failure and failover condition would improve the efficiency of a network (paragraphs 13, 14, Vosseler). Furthermore, there would be interruption free working of the network transmission/communication (paragraph 47, Vosseler).

With respect to claim 13,

Cotner discloses the system as recited in claim 12, wherein said substitution information includes association information associating an identifier of said DBMS running on said failed computer with an identifier of said substitute DBMS already running on said another computer, said substitution information indicating that said storage area managed by said DBMS running on said failed computer is to be managed by said substitute DBMS already running on said substitute computer when a failure occurs (the resync port number is pre assigned and this is similar to the unique identifier of the substitute computer, column 5 lines 7 – 37, Cotner).

With respect to claim 14,

Cotner discloses the system as recited in claim 13, wherein said substitution information comprises a mutual substitution configuration in which two of the DBMSs are associated with one another whereby one of the two DBMSs is a substitute DBMS for the other of the two DBMSs as a failed DBMS mutually (column 5 lines 22 – 34, Cotner).

With respect to claim 15,

Cotner disclose the system as recited in claim 13, wherein said substitution information comprises a substitution configuration in which a group of the DBMSs from a first DBMS to a last DBMS are associated with each other in a manner whereby a first DBMS is a substitute DBMS for a second DBMS which is a substitute DBMS for a third DBMS, and the last DBMS is a substitute DBMS for the first DBMS (column 5 lines 17 – 33, Cotner).

With respect to claim 16,

Cotner discloses the system as recited in claim 13, wherein said substitution information comprises an n-to-1 substitution configuration whereby one of the DBMSs is a substitute DBMS for n of the DBMSs as failed DBMSs (as shown in Figure 5 and column 5 lines 30 – 37 explain that the resync port number is matched to a list and it would be inherently possible that more than one system could have the same resync number, Cotner).

With respect to claim 17,

Cotner discloses the system as recited in claim 12, wherein said substitution information includes a plurality of pieces of association information each associating an identifier of said DBMS running on said failed computer, an identifier of the DBMS already running on one of a plurality of substitute computers, and priority information

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indicating a priority with one another, said substitution information indicating that said storage area managed by said DBMS running on said failed computer is to be managed by said DBMS already running on one of said substitute computers selected according to said priority information (column 5 lines 7 – 37, Cotner).

With respect to claim 18,

Cotner discloses the system as recited in claim 12, wherein the substitution control section of said substitute computer is configured to take over processing from said failed computer based on said substitution information (column 3 lines 3 – 9, Cotner).

With respect to claim 34,

Cotner discloses a method for processing databases in a system comprising a processing request receiving server, a plurality of storage areas, and a plurality of database access servers, wherein each storage area in the plurality of storage areas includes at least one database, and wherein each database access server in the plurality of database access servers is associated with a storage area in the plurality of storage areas, thereby enabling said each database access server to manage and access its associated storage area, the method comprising:

when a failure has occurred in a first database access server in the plurality of database access servers, obtaining preconfigured substitution information identifying a

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mapping between the first database access server and a second database access server in the plurality of database access servers, wherein the first and second database access servers are distinct (Figure 2, column 2 lines 60 – 67 and column 3 lines 1 – 9, Cotner);

based on the preconfigured substitution information, re-associating a storage area associated with the first database access server such that the storage area becomes associated with the second database access server, thereby enabling the second database access server to manage and access the storage area (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner);

receiving a processing request directed to a target database access server in the plurality of database access servers, the processing request being received by the processing request receiving server (column 5 lines 7 – 37, Cotner);

determining whether the target database access server is in operation (column 5 lines 22 – 34, Cotner);

if the target database access server is in operation, forwarding the processing request to the target database access server, wherein the target database access server is configured to process the forwarded processing request (column 5 lines 17 – 33, Cotner);

if the target database access server is not in operation:

determining a substitute database access server for the target database access server based on the preconfigured substitution information (column 5 lines 7 – 37, Cotner);

modifying the processing request to include a substitution instruction (column 5 lines 7 – 37, Cotner); and

transmitting the modified processing request to the substitute database access server, wherein the substitute database access server is configured to identify the substitution instruction in the modified processing request, obtain execution environment information for the target database access server, switch an execution environment of the substitute database access server to that of the target database access server based on the execution environment information, and process the processing request on behalf of the target database access server (Figure 2 and column 1 lines 41 – 62, Cotner).

Cotner however does not disclose the the backup dbms or server already running explicitly as claimed.

However, Vosseler teaches the failover condition in paragraphs 13, 14 and 32.

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both are in the same field of invention of network flow and maintenance along with monitoring. Furthermore, the detection of possible failure and

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failover condition would improve the efficiency of a network (paragraphs 13, 14, Vosseler). Furthermore, there would be interruption free working of the network transmission/communication (paragraph 47, Vosseler).

With respect to claim 35,

Cotner discloses the method of claim 34, wherein the mapping associates an identifier of the first database access server with an identifier of the second database access server, the mapping indicating that a storage area associated with the first database access server is to be associated with the second database access server when a failure occurs in the first database access server (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner).

With respect to claim 36,

Cotner discloses the method of claim 35, wherein the mapping further indicates that a storage area associated with second database access server is to be associated with the first database access server when a failure occurs in the second database access server (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner).

With respect to claim 37,

Cotner discloses a system for processing databases, the system comprising:

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a processing request receiving server (Figure 2, column 2 lines 60 – 67 and column 3 lines 1 – 9, Cotner);

a plurality of storage areas, each storage area including at least one database (Figure 2, column 2 lines 60 – 67 and column 3 lines 1 – 9, Cotner); and

a plurality of database access servers, each database access server being associated with a storage area in the plurality of storage areas, thereby enabling said each database access server to manage and access its associated storage area (Figure 2, column 2 lines 60 – 67 and column 3 lines 1 – 9, Cotner),

wherein the processing request receiving server is configured to:

receive a processing request directed to a target database access server in the plurality of database access servers (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner);

determine whether the target database access server is in operation (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner);

if the target database access server is in operation, forward the processing request to the target database access server, wherein the target database access server is configured to process the forwarded processing request (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner);

if the target database access server is not in operation:

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determine a substitute database access server for the target database access server based on preconfigured substitution information (column 5 lines 22 – 34, Cotner);

modify the processing request to include a substitution instruction (column 5 lines 22 – 34, Cotner); and

transmit the modified processing request to the substitute database access server, wherein the substitute database access server is configured to identify the substitution instruction in the modified processing request, obtain execution environment information for the target database access server, switch an execution environment of the substitute database access server to that of the target database access server based on the execution environment information, and process the processing request on behalf of the target database access server (Figure 2 and column 1 lines 41 – 62, Cotner).

Cotner however does not disclose the the backup dbms or server already running explicitly as claimed.

However, Vosseler teaches the failover condition in paragraphs 13, 14 and 32.

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both are in the same field of invention of network flow and maintenance along with monitoring. Furthermore, the detection of possible failure and failover condition would improve the efficiency of a network (paragraphs 13, 14, Vosseler). Furthermore, there

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would be interruption free working of the network transmission/communication (paragraph 47, Vosseler).

With respect to claim 38,

Cotner discloses the system of claim 37, wherein the preconfigured substitution information includes a mapping associating an identifier of the target database access server with an identifier of the substitute database access server, the mapping indicating that a storage area associated with the target database access server is to be associated with the substitute database access server when a failure occurs in the target database access server (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner).

With respect to claim 39,

Cotner discloses the system of claim 38, wherein the mapping further indicates that a storage area associated with substitute database access server is to be associated with the target database access server when a failure occurs in the substitute database access server (Figures 3 and 4, column 4 lines 60 – 67 and column 5 lines 1 – 6, Cotner).

Conclusion

6. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

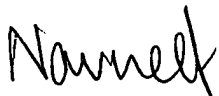
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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

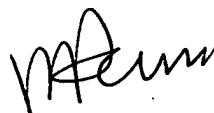
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Navneet K. Ahluwalia
Examiner
Art Unit 2166

Dated: 01/11/2008



HOSAIN ALAM
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